



CITY OF GREENVILLE, NC
CITY COUNCIL MEETING

Updates and Revisions to the City of Greenville's Manual of Standard Designs and Details



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

Agenda

- History/Background
- Process
- Contents
- Revision Highlights
- Points of Discussion
- Recommendation



Manual of Standard Designs and Details (MSDD)

The manual which developers, contractors, builders and engineers use to develop plans for the public infrastructure in residential and commercial construction within the City of Greenville.



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

History

- Developed in 1980
- Last major revisions completed in 1997



Background

- City ordinance provides the rules which must be followed in development
- MSDD shows you how to build it
- Example: Sidewalks
 - Ordinance – When developers must install sidewalks
 - MSDD - Where to locate and how to construct sidewalks within the right of way
- Development community requested the MSDD be updated



CITY OF GREENVILLE, NC CITY COUNCIL MEETING

Process to Update the MSDD

- 4 Workgroup Meetings
 - 2 Engineering Consulting Firms
 - 2 Developers
 - 1 Builder
 - Greenville Utilities
 - Department of Community Development
- 3 Stakeholders Meetings
- 1 Public Input Meeting



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

MSDD

Contents

- Plat Preparation
- Stormwater
- Erosion & Sedimentation Control
- Streets
- Driveways
- Parking
- Record Drawings



Background Plat Preparation

- Purpose: provide proper certifications and signatures on official documents approved by the City



Revision Highlights Plat Preparation

- Surveyors certification revised to comply with North Carolina State Board requirements



Background Stormwater Standards

- Purpose: Specifies the intensity and duration of the storm that the system must meet.
 - 2 Year design storm: catch basins
 - 10 Year design storm: drainage pipes and ditches



Revision Highlights Stormwater

- New standards on drainage which will decrease frequency of street flooding and amount of water on the roadway for
 - Collector streets, 1 set of tires on roadway
 - Minor thoroughfares, 1 lane in each direction
 - Major thoroughfares, 1 lane in each direction
 - Standard residential street design remains the same



Background Erosion & Sedimentation Control

- Purpose: control sediment release from construction sites
- The State has delegated authority to the City of Greenville



Revision Highlights Erosion & Sedimentation Control

- Now references the State of North Carolina Erosion and Sedimentation Manual
 - Follow State standards
 - Allows for automatic update



Background Streets Standards

- Purpose: Specify the width and design of:
 - Residential Streets
 - Collector Streets
 - Minor Thoroughfares
 - Major Thoroughfares



Revision Highlights Streets

- Eliminated Minor 24' B/B Residential Street Standards
 - Did not provide for adequate passage of emergency vehicles and City service vehicles.
- Developers responsible for installation of street signs
- Created subdivision entrance island standard



Background

Driveways and Parking

- Purpose:
 - Sets standards for driveway widths, materials and spacing along roadways
 - Parking space dimensions and layout



Revision Highlights Driveways and Parking

- Change in sight distance requirements at intersections
- No changes to parking



Background Record Drawings

- Purpose: Provide information to ensure project was constructed correctly and data for future planning by City and private parties



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

Points of Discussion

- Grading for Future Sidewalk
- Requirement for Record Drawings
- Hydraulic Grade Line
- New Standard for Street Flooding



Grading for Future Sidewalk

- Provides an area for the City to install sidewalk with minimal grading
- Less impact on adjacent property owners when sidewalk is installed



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

Grading for Future Sidewalk





Requirement for Record Drawings

- Provides record drawings after completion of subdivisions
- Allows the City to ensure the project was constructed per standards and per the approved plan
- Provides planning and maintenance information



Revision Highlights Record Drawings

- Initially the stakeholders had concerns regarding:
 - Costs
 - Need



Revision Highlights Record Drawings

- Costs should not be high as long as project is constructed correctly and changes in design are noted during construction – total survey no longer required as proposed in initial draft
- Data will provide the City with valuable information for future planning and maintenance



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

Cities Requiring Record Drawings

Wilmington

Raleigh

Cary

Asheville

Fayetteville - Certifications only

Greensboro - Implementing

Charlotte

Durham

Winston-Salem



Hydraulic Grade Line

- Provides the elevation of the water caused by the energy in moving water
- Provides the information necessary to determine if the design needs to be changed. If it cannot be changed it tells us how the area will be impacted by the water.



Hydraulic Grade Line

Stakeholders Concerns

- Costs (Design)
- Need



Hydraulic Grade Line

- This analysis should currently be performed by the designer, however the City has never required submission (no additional costs)
- Still areas within the City which have slopes which could be a factor



New Standard for Street Flooding

- To establish the maximum amount of water allowed in the roadway
- Enable the traveling public to see the roadway



New Standard for Street Flooding

- Present Standard
 - 6" of water allowed at the curb
 - Water over entire roadway
- Proposed Standard
 - Residential unchanged
 - Collector streets, minor and major thoroughfares – 8' Spread



New Standard for Street Flooding

City	Design Requirement
Wilmington	8' spread or 1/3 of lane width, whichever is less
Jacksonville	2' spread and no crosswalks covered
Rocky Mount	6' spread + gutter section (7.5' total)
Cary	8' spread, may be decreased in high pedestrian traffic areas
Raleigh	1/2 of lane on 2&3 lane streets (7.5') 1 lane on 4 or more lane streets (13.5')
Durham	Standard residential streets - 7' spread Collector streets - 8.5' spread



New Standard for Street Flooding

- Stakeholders Concerns
 - Increase in costs due to number of catch basins
 - Not necessary due to vehicles not hydroplaning



New Standard for Street Flooding

- Increase in costs
- Issue is not about hydroplaning, it is being able to see the roadway



CITY OF GREENVILLE, NC

CITY COUNCIL MEETING

Staff Recommendation

- Hold a public hearing
- Approve the MSDD as presented